

IN THE CLAIMS:

1. - 3. (canceled).

4. (new) An apparatus for imaging fluorescent particles stained with a fluorescent dye, comprising:

an imaging container having an interior space, an exterior surface, an upper portion, and a bottom portion having a side wall and a bottom wall for collecting fluorescent particles, a part of the exterior surface of the imaging container corresponding to the side wall of the bottom portion defining a first entry surface of the imaging container for receiving an excitation beam of light, and a part of the exterior surface of the imaging container corresponding to the bottom wall of the bottom portion defining a second entry surface of the imaging container for receiving an excitation beam of light;

light generating means for generating an excitation beam of light for exciting the fluorescent particles collected in the bottom portion of the imaging container;

first illumination means for irradiating the excitation beam of light generated by the light generating means onto the first entry surface of the imaging container to illuminate the fluorescent particles collected in the bottom portion of the imaging container;

second illumination means for irradiating the excitation beam of light generated by the light generating means onto the second entry surface of the imaging container to illuminate the fluorescent particles collected in the bottom portion of the imaging container;

switching means for switching between the first illumination means to irradiate the excitation beam of light generated by the light generating means onto the first entry surface of the imaging container and the second illumination means to irradiate the excitation beam of light generated by the light generating means onto the second entry surface of the imaging container; and

an imaging device for capturing images of the illuminated fluorescent particles from the bottom wall of the imaging container.

5. (new) An apparatus according to claim 4; wherein the switching means comprises an optical element movable between a first position in which the optical element is removed from an optical path of the excitation beam of light so that the excitation beam of light is irradiated onto the first entry surface of the imaging container and a second position in which the optical element is disposed in the optical path of the excitation beam of light so that the excitation beam of light is reflected by the optical element and irradiated onto the second entry surface of the imaging container.

6. (new) An apparatus according to claim 4; wherein the light generating means comprises a first light source for generating the excitation beam of light irradiated by the first illumination means and a second light source for generating the excitation beam of light irradiated by the second illumination means; and wherein the switching means includes means for switching between the first light source and the second light source to generate the excitation beam of light.

7. (new) An apparatus according to claim 4; wherein the first illumination means includes means for irradiating the excitation beam of light generated by the light generating means onto the first entry surface but not the second entry surface of the imaging container; and wherein the second illumination means includes means for irradiating the excitation beam of light generated by the light generating means onto the second entry surface but not the first entry surface of the imaging container.

8. (new) An apparatus according to claim 4; wherein the first illuminating means includes means for irradiating the excitation beam of light generated by the light generating means onto the first entry surface of the imaging container in a direction generally parallel to the bottom wall thereof.

9. (new) An apparatus for imaging fluorescent particles, comprising:

an imaging container having a lower section defining an interior space for containing fluorescent particles, the lower section having a side wall, a bottom wall and an exterior surface portion defining a first entry surface corresponding to the side wall for transmitting into the interior space an excitation beam of light and a second entry surface corresponding to the bottom wall for transmitting into the interior space an excitation beam of light;

light projecting means for selectively projecting an excitation beam of light onto the first or second entry surface of the imaging container to illuminate the fluorescent particles; and

means for capturing images of the illuminated fluorescent particles from the bottom wall of the imaging container.

10. (new) An apparatus according to claim 9; wherein the light projecting means comprises an optical element movable between a first position in which the optical element is removed from an optical path of the excitation beam of light so that the excitation beam of light is irradiated onto the first entry surface of the imaging container and a second position in which the optical element is disposed in the

optical path of the excitation beam of light so that the excitation beam of light is reflected by the optical element and irradiated onto the second entry surface of the imaging container.

11. (new) An apparatus according to claim 9; wherein the light projecting means includes means for irradiating the excitation beam of light onto the first entry surface of the imaging container in a direction generally parallel to the bottom wall thereof.

12. (new) In combination: an imaging container having a lower section defining an interior space for containing one of first fluorescent particles having a relatively high transmittance to exciting light and second fluorescent particles having a relatively low transmittance to exciting light, the lower section having a side wall, a bottom wall and an exterior surface portion defining a first entry surface corresponding to the side wall for transmitting into the interior space an excitation beam of light and a second entry surface corresponding to the bottom wall for transmitting into the interior space an excitation beam of light; light projecting means for projecting an excitation beam of light onto the first entry surface of the imaging container when the interior space of the imaging container

contains the first fluorescent particles to thereby illuminate the first fluorescent particles and for projecting an excitation beam of light onto the second entry surface of the imaging container when the interior space of the imaging container contains the second fluorescent particles to thereby illuminate the second fluorescent particles; and means for capturing images of the illuminated fluorescent particles from the bottom wall of the imaging container.

13. (new) A combination according to claim 12; wherein the light projecting means means comprises an optical element movable between a first position in which the optical element is removed from an optical path of the excitation beam of light so that the excitation beam of light is irradiated onto the first entry surface of the imaging container and a second position in which the optical element is disposed in the optical path of the excitation beam of light so that the excitation beam of light is reflected by the optical element and irradiated onto the second entry surface of the imaging container.

14. (new) A combination according to claim 12; wherein the light projecting means includes means for irradiating the excitation beam of light onto the first entry surface of the imaging container in a direction generally parallel to the bottom wall thereof.

15. (new) A combination according to claim 12;
wherein the first fluorescent particles comprise one of a
blood platelet derivative and a diluted red blood cell
derivative.

16. (new) A combination according to claim 12;
wherein the second fluorescent particles comprise a high-
concentration red blood cell derivative.